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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,023	09/29/2005	Andrea Giraldo	NL 030336	8259
24737 7590 12/27/2007 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER ZUBAJLO, JENNIFER L	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 12/27/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,023	<b>Applicant(s)</b> GIRALDO ET AL.	
	<b>Examiner</b> Jennifer Zubajlo	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/15/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iranpour Khormaei (Patent Number: 5,652,600) in view of Applicant's Admitted Prior Art.

As to claims 1, 11, and 12, Khormaei teaches: A display device and method (see column 1 lines 6-8) for driving a display device comprising: a display with a plurality of light emitting elements (see figures 1 & 2 – element 104, column 5 lines 28-32), and data lines (see figure 2 – element 100) for providing pulse width modulation signals to the light emitting elements (see figures 10-13 & column 5 lines 19-21 and column 8 lines 1-8); and means/controller (see figure 2– element 36 and figure 15 – element 306) coupled to the data lines for generating, during time intervals of a frame period, at least a first non-zero emission level of a light emitting element during a first one of the time intervals and a second non-zero emission level during a second one of the time intervals (see figures 10-13 & column 8 lines 1-8 & 38-55).

Khormaei doesn't directly teach wherein the generating means generates the first and second time intervals in an order that reduces dead times between the time intervals.

Applicant's Admitted Prior Art teaches wherein the generating means/controller generates the first and second time intervals in an order that reduces dead times between the time intervals (see figures 3 & 4, [0005], [0037], [0039]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate generating the first and second time intervals in an order that reduces dead times between the time intervals taught by Applicant's Admitted Prior Art into the display device and method for driving taught by Khormaei in order to more efficiently use the available time in the frame period (see Applicant's Admitted Prior Art - figure 4 & [0039]).

As to claim 2 (dependent on claim 1), Khormaei teaches the display further comprising selection lines, each selection line being coupled to a part of the plurality of light emitting elements, the generating means being further coupled to the selection lines for applying a multiline addressing scheme to the data lines and the selection lines (see figures 8 and 15 and column 8 lines 38-55). Applicant's Admitted Prior Art also teaches the application of multiline addressing (see figures 3 & 4 and [0005], [0037], and [0039]).

As to claims 3 and 13 (dependent on claim 1 and claim 12 respectively), Khormaei teaches wherein the generating means/controller are adapted to generate time intervals of a substantially binary weighted duration wherein each of the time intervals is assigned the substantially binary weighted duration regardless of emission levels during each of the time intervals (see column 6 lines 28-34 & column 8 lines 1-8). Applicant's Admitted Prior Art also teaches wherein the generating means/controller are adapted to generate time intervals of a substantially binary weighted duration wherein each of the time intervals is assigned the substantially binary weighted duration regardless of emission levels during each of the time intervals (see figures 3 & 4, [0037], [0037]).

As to claims 4 and 14 (dependent on claim 1 and 12), Khormaei teaches wherein the generating means/controller are adapted to generate time intervals of a substantially binary weighted duration regardless of an ordering of the time intervals (see figure 10, column 6 lines 28-34 & column 8 lines 1-8). Applicant's Admitted Prior art also teaches wherein the generating means/controller are adapted to generate time intervals of a substantially binary weighted duration regardless of an ordering of the time intervals (see figures 3 & 4, [0037], [0039]).

As to claim 5 (dependent on claim 1), Khormaei teaches wherein the generating means are adapted to generate the first and second emission level via the data lines in an intermixed mode (see figure 10 and column 8 lines 1-8).

As to claim 9 (dependent on claim 1), Khormaei teaches the generating means are adapted to generate the second emission level at a level substantially equal to the first emission level multiplied by a number of selectable combinations of time intervals (see figures 14,15 & column 8 lines 1-37).

As to claim 10 (dependent on claim 1), Khormaei teaches an electric device comprising a display device according to claim 1 (column 1 lines 36-52 & column 2 lines 54 - column 3 line 14 & column 8 lines 1-37).

3. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iranpour Khormaei (Patent Number: 5,652,600) in view of Applicant's Admitted Prior Art, and further in view of Allen J. Rushing (Patent Number: US 6,567,171 B1).

As to claim 6 (dependent on claim 3), the combination of Khormaei and Applicant's Admitted Prior Art teaches the limitations as described above in the rejection of claims 1 and 3.

The combination of Khormaei and Applicant's Admitted Prior Art do not directly teach the generating means comprising a control unit, and a data driver comprising a first current source for generating the first emission level and a second current source for generating the second emission level.

Rushing teaches the generating means comprising a control unit, and a data driver comprising a first current source for generating the first emission level and a second current source for generating the second emission level (see column 9 lines 36-46 & column 12 lines 18-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the first and second current sources taught by Rushing into the display device taught by the combination of Khormaei and Applicant's Admitted Prior Art in order to obtain intensity control within a light emitting display device.

As to claim 7 (dependent on claim 5), the combination of Khormaei and Applicant's Admitted Prior Art teaches the limitations as described above in the rejection of claims 1 and 5. Khormaei also teaches the generating means pre-charging the data lines (see figures 2-6).

The combination of Khormaei and Applicant's Admitted Prior Art do not directly teach coupling one of the current sources to one of the data lines.

Rushing teaches coupling one of the current sources to one of the data lines (see figure 3, column 9 lines 36-46 & column 12 lines 18-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the current sources taught by Rushing into the display device taught by the combination of Khormaei and Applicant's Admitted Prior Art in order to obtain intensity control within a light emitting display device.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iranpour Khormaei (Patent Number: 5,652,600) in view of Applicant's Admitted Prior Art, and further in view of Charles Pooley (Patent Number: US 4,771,278).

As to claim 8 (dependent on claim 1), the combination of Khormaei and Applicant's Admitted Prior Art teaches the limitations as described above in the rejection of claim 1.

The combination of Khormaei and Applicant's Admitted Prior Art does not directly teach a power line for coupling a first supply voltage to the plurality of light emitting elements for generating the first emission level and a second supply voltage for generating the second emission level, respectively.

Pooley teaches a power line for coupling a first supply voltage to the plurality of light emitting elements for generating the first emission level and a second supply voltage for generating the second emission level, respectively (see claim 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the first and second supply voltages (power supplies) taught by Pooley into the display device taught by the combination of Khormaei and Applicant's Admitted Prior Art in order to supply different voltages to the light emitting elements.



**Note:** References cited include just some examples that Examiner feels best explain the prior art rejection. However, the entire references teach the scope of the claims in more detail. Examiner recommends that Applicant read the full disclosures.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent Number: US 4,021,607; Patent Number: US 6,288,695 B1; Patent Number US 6,281,868 B1; and Publication Number: US 2002/0130893 A1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Zubajlo whose telephone number is (571) 270-1551. The examiner can normally be reached on Monday-Friday, 8 am - 5 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571) 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JZ  
12/18/07

  
AMARE MENGISTU  
SUPERVISORY PATENT EXAMINER